

AMENDMENT UNDER 37 C.F.R. § 1.116
Application Serial No. 10/020,130
Attorney Docket No. Q67762

REMARKS

Claims 1-10, 18-28 are all the claims pending in the application. Claims 1, 6, 18-19 and 25-28 are amended. No new matter is presented.

To summarize the Office Action, claims 1, 18, 25 and 27 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Dabak (U.S. Patent No. 6,862,275) in view of Toskala et al. (U.S. Patent No. 6,650,905, hereinafter “Toskala”); claims 2-5 and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dabak in view of Toskala and Mohebbi (U.S. Patent No. 6,603,971); claims 6, 19, 26 and 28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dabak in view of Toskala and Roxbergh (U.S. Patent No. 6,553,016); and claims 7-10, 20-22 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Dabak in view of Toskala and Roxbergh, further in view of Mohebbi.

The outstanding rejections are traversed, as set forth below.

Claim Rejections - 35 U.S.C. § 103

Independent claims 1 and 18

As noted above, claim 1 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Dabak in view of Toskala. Notwithstanding the Examiner’s rejection, Applicant submits that neither Dabak nor Toskala, whether taken alone or in combination, teaches or suggests all the limitations of claim 1.

Claim 1 defines a novel transmission power control method presenting new features. For instance, the mobile terminal selects a first base station that is transmitting user data in a

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downlink signal with a preferred reception quality and the mobile terminal transmits identification of the selected first base station to the first base station and other base stations not selected by the mobile terminal. Further, the mobile terminal determines transmission power of downlink signals from the other base stations not selected by the mobile terminal, which are transmitting user data in the downlink signals after the identification of the selected first base station is transmitted. The mobile terminal sends information to the other base stations to modify the transmission power of the downlink signals of the other base stations based on the determined transmission power of the downlink signals from the other base stations not selected by said mobile terminal.

As defined by claim 1, the other base stations terminate transmission of user data to the mobile terminal if the identification, which is transmitted by the mobile terminal, is properly received at the other base stations, and the other base stations continue to transmit user data after the selecting of the first base station if the identification of the selected first base station transmitted by the mobile terminal is not properly received at the other base stations. In addition, claim 1 recites the feature of the other base stations transmit user data to the mobile terminal prior to the selecting of the first base station, and the other base stations do not properly receive the identification of the selected first base station and continue to transmit without terminating transmission of user data.

Dabak does not suggest *at least* the features of modifying the transmission power of other base stations based on the determined transmission power of the downlink signals from the other base stations that are not selected by a mobile, as claimed. For instance, Dabak teaches a

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communications network where the selection of a base station by a mobile terminal is based on whether base stations employ transmit diversity. *See* Dabak at col. 2, lines 27-34 and col. 6, lines 41-53. However, as taught by Dabak, after a base station is selected, the transmission of data symbols by base stations that were not selected is terminated. *See* Dabak at col. 6, lines 64-66. Indeed, the base stations which are not selected merely transmit pilot symbols. *See* Dabak at col. 7, lines 2-5.

Applicant respectfully disagrees with the Examiner's characterization of Dabak regarding the selection of a base station and the subsequent termination of "other base stations". In the grounds of rejection, the Examiner alleges as follows:

"Dabak, as asserted in the Office Action dated July 29, 2005 (See lines 6-12 of the rejection of Claim 1), teaches base stations (504, 506) that are not selected. These base stations will transmit data in the subsequent data frames. The subsequent data frames are the frames after the frame during which the transmission of data from base stations is terminated. The transmission of data is terminated for the next frame, which means that there will be data transmissions in the subsequent frames following said next frame (*See* Column 6, lines 2 - 7, lines 64 -67, Column 7 lines 1 - 4)."

See Office Action at page 2.

Thus, the Examiner contends that Dabak teaches a base station which is not selected will only terminate transmission of a single frame of user data (i.e., the "next data frame") and the other base stations must then resume transmitting user data, despite not being selected for

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communication with the mobile terminal, in any “subsequent frames”. This interpretation, however, is not consistent with the actual disclosure of Dabak. For instance, Dabak teaches that after transmission of the identity of the primary base station back to the network control station, the network control station “then terminates transmission of data symbols to the mobile unit 512 in the next data frame from all except the selected base station.” *See* Dabak at col. 6, lines 5-11. Further, Dabak teaches that the base stations that are not selected transmit only pilot signals so that “the mobile unit *may repeat* the base selection process for subsequent data frames.” *See* Dabak at col. 7, lines 2-4 (emphasis added).

Contrary to the Examiner’s interpretation, Dabak does not suggest that the base stations that are not selected will necessarily transmit user data in any frame that follows the “next frame”. Rather, Dabak teaches that pilot symbols are continuously transmitted by non-selected base stations following the selection of a primary base station so that the mobile terminal may subsequently determine that another base station has a preferred signal-to-interference ratio (SIR). Then, if another base station is determined to have a preferred SIR characteristic, the previously selected primary base station, as well as any other base station communicating with the mobile terminal other than the newly determined primary base station, will cease to transmit user data.

Moreover, claim 1 requires that the other base stations terminate transmission of user data to the mobile terminal if the identification, which is transmitted by the mobile terminal, is properly received at the other base stations, and the other base stations continue to transmit user data after the selecting of the first base station if the identification of the selected first base

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station transmitted by the mobile terminal is not properly received at the other base stations. By contrast, Dabak does not suggest that any of the base stations do not properly receive identification of a primary base station and continue to transmit user data. Rather, Dabak clearly contemplates that base stations that are not selected will terminate the transmission of user data.

Consequently, Dabak does not suggest that the other base stations transmit user data to the mobile terminal prior to the selecting of the first base station, and the other base stations do not properly receive the identification of the selected first base station and continue to transmit without terminating transmission of user data, which claim 1 requires. Rather, as demonstrated above, Dabak merely envisions that non-selected base stations will terminate transmission of user data after the transmission of the identity of the primary base station, and Dabak therefore provides no suggestion for modify the transmission power of the downlink signals of the other base stations based on the determined transmission power of the downlink signals from the other base stations not selected by said mobile terminal, as claimed.

Further, Toskala fails to compensate for the deficient teaching of Dabak. For instance, Toskala teaches a soft-handover method in a telecommunications network in which user equipment (i.e., a cellular phone) selects one cell from an active set, periodically informs a primary cell ID to the connecting cells via an uplink in a feedback information field, and the non-primary cells, or the base stations that are not selected, terminate transmission of the Dedicated Physical Data Channel (DPDCH). *See* Toskala at col 10, lines 18-29. Further, Toskala merely teaches that the Dedicated Physical Control Channel (DPCCH) transmission power level can be updated regardless of the selected state. *See* Toskala at col. 10, lines 31 - 44. However, as

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noted above, Toskala teaches that the user data transmission (i.e., the DPDCH) is terminated for non-primary base stations. Thus, Toskala does not teach or suggest modifying the transmission power of the downlink signals of the other base stations, as defined by claim 1, based on the determined transmission power of the downlink signals from the other base stations not selected by said mobile terminal

Therefore, even assuming *arguendo* that the motivation to combine Dabak and Toskala is proper, the combination fails to teach or suggest all the features of claim 1. Accordingly, reconsideration and withdrawal of the rejection of claim 1 is requested. In addition, claims 2-5 and 25 are allowable at least by virtue of depending from claim 1.

Further, Applicant submits that the above arguments are equally applicable to the rejection of claim 18, which defines a mobile terminal having similar features. Thus, claim 18 is allowable at least for the same reasons discussed above. Dependent claims 21-23 and 27 are allowable at least by virtue of depending from claim 18.

Independent claims 6 and 19

Claims 6 and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dabak in view of Toskala and Roxbergh. As demonstrated by the following, the combination of Dabak, Toskala and Roxbergh fails to reasonably teach or suggest all the limitations of these claims.

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For instance, claim 6 defines a receiving method for demodulating user data in a downlink signal from base stations to a mobile terminal. As claimed, the mobile terminal selects a first base station transmitting user data in a downlink signal having a preferred reception quality and the mobile terminal transmits identification of the selected first base station to the first base station and the other base stations not selected by the mobile terminal. In addition, claim 6 recites the feature of using downlink signals from the other base stations not selected by the mobile terminal that transmit user data after the identification of the selected first base station is transmitted, to demodulate, at the mobile terminal, user data from the selected first base station by combining the downlink signal of the selected first base station and the downlink signals from the other base stations not selected by said mobile terminal

As defined by claim 6, the other base stations terminate transmission of user data to the mobile terminal if the identification, which is transmitted by the mobile terminal, is properly received at the other base stations, and the other base stations continue to transmit user data after the selecting of the first base station if the identification of the selected first base station transmitted by the mobile terminal is not properly received at the other base stations. In addition, claim 6 recites the feature of the other base stations transmit user data to the mobile terminal prior to the selecting of the first base station, and the other base stations do not properly receive the identification of the selected first base station and continue to transmit without terminating transmission of user data.

The above arguments with respect to Dabak and Torskala are equally applicable to the rejection of claim 6. As demonstrated previously, Dabak does not suggest that any of the base

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stations do not properly receive identification of a primary base station and continue to transmit user data, which claim 6 likewise requires. Rather, Dabak clearly contemplates that base stations that are not selected will terminate the transmission of user data. Further, Dabak does not suggest that the other base stations transmit user data to the mobile terminal prior to the selecting of the first base station, and the other base stations do not properly receive the identification of the selected first base station and continue to transmit without terminating transmission of user data.

Also, as previously demonstrated, Toskala merely teaches that the dedicated physical control channel transmission power level can be updated regardless of the selected state. Moreover, Toskala teaches that the non-primary cells (i.e., base stations that are not selected) terminate transmission of the Dedicated Physical Data Channel (DPDCH). *See* Toskala at col 10, lines 18-29.

Thus, neither Dabak nor Toskala, whether taken alone or in combination, teach demodulating user data from the selected first base station by combining the downlink signal of the selected first base station and the downlink signals from the other base stations, as defined by claim 6. Moreover, as evidenced by the foregoing, neither Dabak nor Taskala suggest other base stations, as claimed, that transmit user data to the mobile terminal prior to the selecting of the first base station, fail to properly receive the identification of the selected first base station and continue to transmit without terminating transmission of user data.

Further, Roxbergh fails to compensate for the deficiencies of the combination of Dabak and Toskala. For instance, Roxbergh teaches a method of downlink power control at soft

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handover in a cellular communications system a mobile terminal may simultaneously communicate with base stations in different cells. *See Roxbergh at col. 3, line 66 - col. 4, line 12.* However, Roxbergh does not suggest that any of the cells with which the mobile terminal is communicating simultaneously are “other base stations”, as defined by claim 6. Indeed, Roxbergh does not suggest that the base stations in different cells transmit user data to the mobile terminal prior to the selecting of the first base station, fail to properly receive the identification of the selected first base station and continue to transmit without terminating transmission of user data.

Therefore, Roxbergh, even assuming for the sake of argument that the asserted motivation to modify the combination of Dabak and Toskala is proper, cannot suggest at least the feature of demodulating user data from the selected first base station by combining the downlink signal of the selected first base station and the downlink signals from the other base stations, as defined by claim 6 and which is deficient in both Dabak and Toskala.

Accordingly, reconsideration and withdrawal of the rejection of claim 6 is requested. Further, Applicant submits that claims 7-10 and 26 are allowable at least by virtue of depending from claim 6.

In addition, Applicant submits that the above arguments are equally applicable to the rejection of claim 19, which defines a mobile terminal reciting similar features. Thus, claim 19 should be allowed at least for the same reasons discussed above. Also, dependent claims 20-21, 24 and 28 should be allowed at least by virtue of depending from claim 19.

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Dependent claims 2-5 and 23

Claims 2-5 and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dabak in view of Toskala and Mohebbi (U.S. Patent No. 6,603,971). Without commenting substantively on this ground of rejection, Applicant submits that these claims are allowable at least by virtue of depending from claims 1 and 18, respectively.

Dependent claims 7-10, 20-22 and 24

Claims 7-10, 20-22 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Dabak in view of Toskala and Roxbergh, further in view of Mohebbi. Without commenting substantively on this ground of rejection, Applicant submits that these claims are allowable at least by virtue of depending on claims 6 and 19, respectively.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

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